

WHAT IS CLAIMED IS:

- Pub  
5
1. An alkaline storage battery comprising:  
a case; and  
a positive electrode, a negative electrode, a separator and an electrolyte that are provided in the case;  
wherein an amount of the electrolyte retained in the separator is at least 15 mg/cm<sup>2</sup> in a period, after assembling the battery, from a time the separator is impregnated with the electrolyte to the time the battery is activated.
- 10
2. The alkaline storage battery according to claim 1, wherein the separator is formed of sulfonated polypropylene, and sulfur atoms and carbon atoms in the separator satisfy a relationship of (the number of the sulfur atoms)/(the number of the carbon atoms) = A, where  $2.0 \times 10^{-3} \leq A \leq 5.5 \times 10^{-3}$ .
- 15
3. The alkaline storage battery according to claim 1, wherein the electrolyte is poured into the case in a vacuum atmosphere.
- 20
4. The alkaline storage battery according to claim 1, wherein the separator has a specific surface area ranging from 0.6 m<sup>2</sup>/g to 0.9 m<sup>2</sup>/g.
- 25
5. The alkaline storage battery according to claim 1, wherein the separator has a median pore diameter of not larger than 30 μm on a volume basis when pores are measured in a range of 0.1 μm to 360 μm with a mercury porosimeter.
- 30
6. The alkaline storage battery according to claim 1, wherein the separator has a weight per unit area ranging from 60 g/m<sup>2</sup> to 85 g/m<sup>2</sup>.
- 35
7. An alkaline storage battery comprising:  
a case; and  
a positive electrode, a negative electrode, a separator and an electrolyte that are provided in the case;  
wherein a total area X (cm<sup>2</sup>) of the separator and an amount Y (mg)

of the electrolyte satisfy a relationship of  $Y/X \geq 20$  in a period, after assembling the battery, from a time the separator is impregnated with the electrolyte to the time the battery is activated.

5 8. The alkaline storage battery according to claim 7, wherein the separator is formed of sulfonated polypropylene, and sulfur atoms and carbon atoms in the separator satisfy a relationship of (the number of the sulfur atoms)/(the number of the carbon atoms) = A, where  $2.0 \times 10^{-3} \leq A \leq 5.5 \times 10^{-3}$ .

10 9. The alkaline storage battery according to claim 7, wherein the electrolyte is poured into the case in a vacuum atmosphere.

15 10. The alkaline storage battery according to claim 7, wherein the separator has a specific surface area ranging from  $0.6 \text{ m}^2/\text{g}$  to  $0.9 \text{ m}^2/\text{g}$ .

20 11. The alkaline storage battery according to claim 7, wherein the separator has a median pore diameter of not larger than  $30 \text{ }\mu\text{m}$  on a volume basis when pores are measured in a range of  $0.1 \text{ }\mu\text{m}$  to  $360 \text{ }\mu\text{m}$  with a mercury porosimeter.

12. The alkaline storage battery according to claim 7, wherein the separator has a weight per unit area ranging from  $60 \text{ g/m}^2$  to  $85 \text{ g/m}^2$ .

25 13. An alkaline storage battery comprising:  
a case; and  
a positive electrode, a negative electrode, a separator and an electrolyte that are provided in the case;  
wherein a chemical compound containing manganese is deposited  
30 on a surface of the separator.

14. The alkaline storage battery according to claim 13, wherein the negative electrode contains a hydrogen absorbing alloy, the hydrogen absorbing alloy containing misch metal and manganese in a composition  
35 ratio of  $1 : B$ , where  $0.2 \leq B \leq 0.5$ .

15. The alkaline storage battery according to claim 13, wherein the

Ch

electrolyte contains a manganese ion.

P

0941346-042401